Mineralization Characteristics And Enrichment Regularity Of Alteration-Type Gold Deposit In Eastern Qinling,China

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Luyuangou gold deposit is located in the north slope of the xionger mountains,eastern Qinling,China,which belongs to the western Henan broken-dermatofibrosarcoma area,southern margin of Northe China platform.According to the type of mineralization,the characteristics of mineral assemblasges and the interpenetration relation between different mineral,the mineralization can be divided into three stages:Quartz-pyrite stage(I):gangue minerals was the milky white massive quartz,metal mineral was the pyrite,which

The main stage of gold mineralization.In this stage,the quartz mostly smoke gray,cut through the early quartz veins.Metal sulfide was disseminated and cloddy.which composed of pyrite,galena,sphalerite,chalcopyrite.Native gold mainly concentrated in the vein quartz,metal sulfides.Fine-grained dust-like characteristics of this stage pyrite.Carbonate stage(III):The last phase of mineralization.The combination of vein quartz,calcite and fluorite mineral appears.Poor mineralization.The existing gold body occur in the capacity seam fault invariably.The gold body assumes layered,stratiform and lenticular outputs.The boundary of ore body relys on chemical analysis to be delineated.

The BSE and EDS were used to study the Regularity of gold mineralization.the histogram shows three peak interval,0-10%,40-50% and 60-100%,which shows there are at least three types of Au migration and aggregation.Further investigation of ore-forming elements shows,the content of Au in gold-silver ore can be high;gold telluride ore Au content is generally not more than 40%;This shows that the combination between elements and substances allocation mechanism affects the occurrence of mineralization and ore-forming efficiency.Also shows that the multi-mode,multi-stage mineralization superimposed is the main characteristic in Alteration-Type Gold Deposit In Eastern Qinling,China.

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Do pyrolytic biomarker fragments retain some diagnosticity?

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The detection of early life signatures based on lipid biomarkers in the sedimentary record is frequently hindered by an intense thermal history of the sediments, which causes cracking of parent biomarker molecules [e.g., 1]. Specific degradation products of hopanes and steranes might however still carry diagnostic value for the reconstruction of past biota when found in mature oils and sediment extracts. Laboratory studies investigating the thermal stability of kerogens and authentic biomarker standards during pyrolysis revealed some characteristic alteration products [e.g. 2, 3] but it is not known if these compounds are unique to their precursors.

We here investigate this question with heating experiments using biomarker standards (steranes and hopanes) under different time and temperature conditions as well as in the presence of a carbonaceous catalyst. Preliminary results show that e.g. 5α-cholestane undergoes conversion to a series of benzenes, naphtalenes, biphenyls and diphenylmethanes at 350°C in the presence of activated carbon but diamondoid hydrocarbons, which are used to evaluate the thermal maturity in crude oils and condensates [e.g. 4], were not generated. Comparison of larger biomarker fragments to cracking products of spiked oils will reveal how unique they are. Such data might extend molecular geobiological approaches to basins that were hitherto precluded by their thermal maturity.

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